Streaming into the future

The value of music in the digital age

MA Thesis New Media & Digital Culture

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Abstract

In March 2015, a new version of music streaming service Tidal was introduced during a press launch. The service promised a higher audio quality, exclusive content and wanted a more fair compensation for the artists' work. The move was a response to an already running debate about the value of music and fair compensation. By stating them so clearly, Tidal's set goals give way to re-evaluate what digital music is still worth in the digital, streaming age. To research this, four types of value are proposed early on: an artistic, financial, content and social value. This research poses the following question: how have the artistic, financial, content and social elements that are part of the value of music been influenced by the introduction of music streaming services like Spotify and the change in materiality that came with it? To research how the introduction of streaming services and the change in materiality in the move from digital files to streaming has influenced those four values, an affordance analysis of Spotify is undertaken. In this analysis, the affordances Spotify offers its users are analysed, to find how streaming music and the way it is consumed differ from earlier forms of music consumption. The findings of this descriptive analysis are then interpreted within the context of the four value types. These interpretations find that artistic value is quite strongly altered by streaming. The idea of an album as a complete work of art is old-fashioned: where downloads could force tracks to be available with a full album only, in streaming each track is available separately. Opposite that, streaming offers new artistic opportunities: music can now be changed or updated after its release, changing the idea of when an album is finished. Financial value has been influenced, too: in streaming, money isn't made by selling albums, but by having tracks streamed as much as possible. Rights holders are paid from income coming from paying subscribers and advertising, invoking a strategy of releasing music exclusively for paying consumers. The content value has seen the largest change in materiality: compared to physical albums, streaming music is very bare bones, stripped to just the music and small artwork. Both artists and Spotify are trying to expand the content beyond the music, through adding elements like lyrics, statistics and curated playlists, with more on the horizon. The social value within Spotify is very minimal: messages can only be sent when attached to a playlist. With the superfluous presence of other online social platforms, there is no need for more, and the way music can be shared on these platforms through Spotify has made it much easier to do so with a large group of people. So far, music value has evolved along with consumption and it is only likely it will continue to do so.

keywords: music value, digital music, music streaming services, Spotify, digital materiality

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1. Introduction

On 30th March, 2015, American hip hop artist Jay Z held a press conference. Together with some of the most popular artists in contemporary music including Madonna, Daft Punk and Coldplay, he announced the launch of a revised version of music streaming service Tidal, which he acquired earlier that month. With the service, Jay Z is looking to provide an alternative to already existing services like Spotify and Deezer, featuring higher quality audio streaming and exclusive content from several popular artists, but at a higher price for customers, according to a news article in *The Guardian* (Dredge 2015). In return for that exclusive content, the service promises a higher payout to artists and record labels for using their recordings. No strange move, considering artist earnings from streaming services have long been a point of criticism from the artists' side and are one of the reasons some refrain from making their music available on these platforms. Journalist Hannah Ellis-Petersen reported in another article for *The Guardian* in November 2014 that popular musician Taylor Swift had all her music removed from Spotify after disagreements over the royalty payout and its business model, which gives users free access to music (Ellis-Petersen 2014).

Whilst Tidal's concept may appear to benefit both interested consumers and the artists offering up their music, the public reaction wasn't kind. In the first days after the announcement, many news media and other commentators appeared to be speaking in a similar sceptical, mocking voice. They would, for example, cite quotes from critical artists not involved with the service, like musician Ben Gibbard in an interview with news website *The Daily Beast*: "I think they totally blew it by bringing out a bunch of millionaires and billionaires and propping them up onstage and then having them all complain about not being paid. ... That's why this thing is going to fail miserably" (Leon 2015). Articles varied from in-depth analyses on why Tidal's ideals were bad to making fun of its launch press conference, with one going as far as describing the event as "a ridiculous orgy of nodding and frowning and Nietzsche quotes and solemn contract-signing" and Tidal itself as "purely a way to make a few middle-aged multimillionaires even richer, and it'll do nothing for artists who lack their platform" (The Guardian 2015).

Although the negativity surrounding Tidal has mellowed down in the months after the press conference, the initial backlash is rather remarkable and may have had a lasting impact on the public image of the service. Much of the criticism displayed mostly focuses on the press launch and the way the service and the artists supporting it presented themselves. However, the articles that dug into the service itself more were mostly critical of its pricing system. For example: in an article for newspaper *The Independent*, journalist Rhodri Marsden wonders whether the increased quality and exclusive content are worth the higher price when comparing it to similar services (Marsden 2015). But what elements determine the value of digital recorded music and how have these values changed from earlier, physical formats?

This research focuses on the value of digital music, with streaming music services at its core and Spotify as a case. This service is chosen as it is the most popular service to stream digital music (Stutz 2015) and is thus likely the one most relevant from both the industries' and the consumers' side, meaning it is also possibly the most influential in altering the perception of music value. Besides its popularity, the service is also one of the longest-running services in its field, with Spotify having launched in 2008. Spotify is analysed using an affordance analysis - which is usually part of a larger material object analysis (Van den Boomen & Lehmann 2014, 9) - looking both at the application in its entirety, but also, on a smaller scale, at its separate parts. An affordance analysis focuses on the affordances of the software, showing what users see as viable actions and how this is possibly steered by the application. The affordances of Spotify have first been examined and described and then, inspired by actor-network theory (Tatnall & Gilding 1999, 957-958), interpreted within its context, as a part of the network of actors involved in music consumption, including the software itself.

Value in itself is a broad concept that can have many meanings and different interpretations, meaning there are many different sides to it that could be researched. Despite that, a substantial amount of research is done from an industry perspective, focusing on whether or not streaming services are helping battle music piracy and how intended consumers are using these services, particularly why they are or are not willing to pay (Doerr et al. 2010; Halmenschlager & Waelbroeck 2014) - in short, why music companies are making money, or more importantly, why not. By doing so, many other possible types of value are neglected. This thesis attempts to contribute to academic discussions on music streaming by expanding beyond financial value alone, building on the ideas of researchers like Tom McCourt (2005)

and Nick White (2010) - who both believe that the format music is in has influenced the way music is consumed and is given a certain value - to discuss how current methods of music consumption have been influenced by their predecessors and their affordances and how a platform like Spotify is shaped both by what earlier formats offered, but also how its users explored the limits of these formats and the new possibilities streaming can offer. Within this research music value is looked at from a wider range, taking in more sides of value, both from an industry and a consumers' perspective. This can strengthen the understanding of music streaming as a form of consumption and as a follow-up to downloading, but also show how music is valued by both producer and consumer and how this has changed through the introduction of streaming. It can hopefully also give an inkling of what is to be expected from future music consumption, giving an insight into what elements of music value are still important and how this has changed over time.

Despite focusing on Spotify as a research case, Tidal has been an inspiration for this paper because of its set goals: right from its big press launch onwards, it has, as a company, been quite vocal what it values in music and artists and what it hopes to achieve. In an interview with Billboard Magazine, rapper Jay Z, the driving force behind Tidal, explained some of the company's ideals. On paying authors for their work: "for someone like me, I can go on tour. But what about the people working on the record, the content creators and not just the artists? If they're not being compensated properly, then I think we'll lose some writers and producers and people like that who depend on fair trade" (Gervino 2015). He also discussed the current mindset on paying for music - which he is hoping to change through Tidal: "people are not respecting the music, and [are] devaluing it and devaluing what it really means. People really feel like music is free ... It's just the mind-set right now" (ibid.). He also discussed the consumer base he's aiming for: "it definitely appeals to people who really care about the music and want to hear it the way it's intended" (ibid.). By being so open about this, Tidal has set itself up for criticism on what is regarded as important in music consumption, but has also prompted others to critically think about what they value in music and the way they consume it. This sets Tidal apart from most of its competition: other streaming services are a lot less vocal on their ideals. This is very helpful in determining the value of digital music: by stating what Tidal values in music, elements of what make up that value can be identified.

Determining a value for digital music is no easy task. This already starts with deciding on a type of value. An obvious first choice would be its financial value - after all, recorded music is being sold for money both in physical and digital form. But, as media researcher Nick White emphasizes, most music is also a work of art (or at least considered so by its authors) and "to assign an artwork an agreed-upon value in order to facilitate its exchange undermines both the personal and the transcendent nature of art, and inevitably devalues and debases it" (White 2010, 16). Thus, next to financial value, music can also have an artistic value, using it as a means of expression or a way to evoke emotion.

These two types of value are also possibly the most discussed in this age of streaming music. Taylor Swift made headlines in 2014 when she removed her music from streaming services that, like Spotify, offer up music for free because she felt she should be rewarded financially for her work (Ellis-Petersen 2014). A year later, pop singer Adele spawned a lot of discussion when she withheld her album *25* from all streaming platforms for artistic reasons. As she declared in an interview with *TIME*: "I don't use streaming. I buy my music ... It's a bit disposable, streaming" (Lansky 2015), in the same article also mentioning she believes "music should be an event" (ibid.) - something she feels it is not when music is streamed.

Both singers' decisions and the introduction of new, competing streaming services has also placed focus on another element of music value: the content value of a musical work. It can make a difference if a piece of music is limited to just that, or whether it comes with (for example) a physical presence in any sense, artwork, a video or any type of other texts that enhance the song or album - and whether and where it is available, and where not. The final value that will be discussed within this research is the social value of music. According to Brown & Sellen, traditionally consuming music has long been a communal activity, going from recording vinyl albums to cassette tapes, copying CDs, sharing mp3 files and, most recently, sharing links to streams or playlists (Brown & Sellen 2006, 38-39). Sharing music or enjoying it together with others remains a core part of music consumption, and is thus considered here as being part of its overall value. These four value types will be further explored in the next chapter.

Though they are definitely not the only possible value types for recorded music, these four are central to this research. They are chosen because, as will be further explored in the next

chapter, all four have been strongly and clearly influenced by the introduction of digital music and will here serve as a starting point to research further changes in the next development in music consumption with. They have also survived through the strong change in materiality recorded music has been through - moving from physical carriers to downloads stored on hard drives, and now, in the cloud. Much like the introduction of digital music meant a big change in thinking about music and its consumption, the streaming era has yet again started to turn things around. Thus, a rethinking of the value of music may be in order and this is an excellent moment to do so. The growing popularity of streaming services and their influence on the idea of ownership and paying for music have given way for many to rethink what digital music means and what it's worth. The same is done in this research. To do so, the following research question is central to this paper: how have the artistic, financial, content and social elements that are part of the value of music been influenced by the introduction of music streaming services like Spotify and the change in materiality that came with it?

To help find an answer to this question, I also pose the following subquestions:

- How have the artistic, financial, content and social elements of music value developed before the introduction of digital music?
- How have these elements been influenced by the digital age and the change in materiality of recorded music?
- How has the introduction of music streaming services like Spotify influenced these values?

In the next section, the artistic, financial, content and social value of recorded music are explored further, tracing how they have developed both before and after the introduction of digital music, up until streaming. There, the influence of a change in materiality first becomes apparent, as it does not just alter the financial worth of music, but also changes the way music is created and released and the social elements surrounding it. This exploration is followed by an explanation of the research method: an affordance analysis of Spotify is undertaken to find what Spotify can offer its users and how it limits them. Inspired by actor-network theory, these findings are then interpreted and their implication for the four values discussed. The immateriality of streaming music and the lack of needing to actually buy

music have changed the artistic boundaries on music, changing what it means to release something as it can be altered without too much implications. Making money from music has changed too: rather than selling albums, it's now about getting as many plays by paying subscribers as possible - leading to a strategy of withholding music from those who don't pay. To make up for the lack of physical content, streaming services like Spotify are offering services that go beyond simple music consumption, including showing lyrics and statistics, creating ways of discovering new music and making it very easy to share music with others. Understanding these changes inflicted by the introduction of streaming services can help to interpret new developments and, by also looking back at what has changed before, give an inkling of what may be next in music consumption.

2. The changing values of music

The four types of value - artistic, financial, content and social value - all have one important element in common: they are firmly grounded in earlier, more traditional forms of music consumption. These types were all already applicable in the days of physical music - yet here they are, still a part of the digital streaming age. Each of these values will be further explored in this chapter to get a better sense of the process that made them evolve to the point where they are now. Tracing how these four types of value have changed when the materiality of recorded music changed from physical to digital gives an overview of what such a change can bring about, similar to how the change from digital files to streaming services like Spotify may currently be invoking changes of its own.

2.1 The age of tangible music

At the core of this research lies the question of the value of a media format and a work of art - in this case, recorded music. Before the file sharing age, recorded music had a certain financial value: a consumer would pay money - how much depended on many different factors - for a carrier featuring recorded music, be that a vinyl record, a cassette, a CD, a MiniDisc or whatever format was popular at that point in time. This carrier followed an established production chain, where it went from artists to record companies to production companies and retailers to end up with the consumer. The consumer then had an original, physical product containing the music he or she wanted to own: a tangible product of financial value. That's not to say there were no ways of getting free music before file sharing took a flight. As sociologist Simon Frith described, in 1987 the music industry was campaigning against the sale of blank tapes which consumers could use to copy records onto tape or record music from radio broadcasts (Frith 1988, 59-60) and according to Voida et al., homemade mix tapes played an important part in consuming and sharing music (Voida et al. 2006, 60). The introduction of the compact disc didn't lessen physical piracy, with it being particularly popular in Russia and the Far East: according to researcher Tim Kuik, in 1998, 150 million pirated CDs were produced in China and Hong Kong, and eighty percent of the music market in Russia was made up of pirated CDs (Kuik 1998, 831-832). However, as is the case with film, books, newspapers and magazines, times have changed, and so have the ways music is produced, sold, consumed and pirated.

The artistic value of a work of art being changed by technological developments was already described by Marxist philosopher Walter Benjamin in his essay "Art in the age of mechanical reproduction" (Benjamin 1936). As he discusses there, every reproduction loses an essential part of the original work of art: its presence in time and space and its history - its authenticity, or aura. Benjamin's focus was mostly on visual art. He argued that by making a reproduction of an artwork, the original is affected as well: its context changes, for it is no longer solely a work of art; it is now also an original, an example which the reproductions are based on. Whilst a reproduction offers the possibility to reach a much larger audience with the same work of art (which he dubs its exhibition value), it loses its cult value, as reproductions miss the context the original work was created in and all it has been through since.

Benjamin describes that what we think of as art is influenced by developments like mechanical reproduction and that a copy of a work of art has less value than an original. The problem with applying Benjamin's ideas to the current situation of music consumption is, however, that an original is hard to pinpoint. Like with photography, a performance or action is captured in time through the means of recording, but it doesn't become a work that is available for mass consumption until a copy is created. It could be argued that, in that case, the performance is the original work of art, but even that is troublesome - with the studio technology available to artists and authors, the end product that is presented as a piece of music rarely consists of the mere capture of a single performance. This is what artist and media researcher Douglas Davis addresses in his essay on works of art in the digital age. According to him, there no longer is a clear distinction between an original and a reproduction in the digital world of art - rather, if digital copies are all considered equal, the concept of original and replica no longer apply (Davis 1995, 381). This could in one sense mean that Benjamin's fear of losing the aura in art entirely has become truth, but could in another mean that not only art, but also the aura itself has evolved. It is this last point that Davis proposes. He believes that the aura is not attached to a work of art, but to an experience: it resides "not in the thing itself but in the originality of the moment when we see, hear, read, repeat, revise" (ibid., 386).

With the digitization of music, the actual idea of buying music hasn't changed much, but the content value of what a consumer gets for his or her money has changed almost entirely.

Before digital music, buying music meant you ended up with a physical artifact: usually a CD, a cassette tape or a vinyl record. With digital downloads, the physical aspect of music has disappeared entirely. However, as media researcher Tom McCourt describes in his article on collecting digital music, the visual and tangible aspects of music were already regressing before that, when most of the music-buying world moved from vinyl albums to CDs (McCourt 2005, 249). He describes the browsing of a vinyl record collection as emotionally gratifying: "it is visual and tactile at the same time. We pore over the jacket art and liner notes. We determine the value of the recording by gauging the wear on the jacket and disc" (ibid., 250). With CDs, this has already lessened for McCourt: its smaller size dampens its visual appeal and its plastic case degrades the tactile sensation.

Similar to McCourt's ideas, Yochim & Biddinger find that music consumers see vinyl albums as a more human way of listening to music because of its imperfections, whereas they see digital music as "disposable, sterile and technocratic, all qualities associated with the inauthentic aspects of consumer culture" (Yochim & Biddinger 2008, 193). Media scholar Yngvar Kjus describes how the tactile, imperfect older formats of music consumption are given a new role through the introduction of digital technology: they are regarded as more authentic and offer a stronger sense of connection to a human source (Kjus 2015, 4). According to McCourt, because of their lack of physical materiality, digital files are entirely void of potential emotive contexts - these files are just data, incapable of having a history (McCourt 2005, 250). This also brings back Walter Benjamin's concept of the aura: if there was any left in physical copies of a music album, it no longer exists in digital files for McCourt, as he remarks that the content of music in digital files is watered down to such a point that they are only a small part of the entire work of art - its further context and physical manifestation largely gone (ibid.).

Consuming music is often a communal practice - people at concerts or parties share the same music, but so do office workers listening to the radio or a household listening to music in the living room. According to Voida et al., sharing music is also an activity with a strong social value that is undertaken in a more literal sense: back in the non-digital days, people used to copy music onto cassettes (either from another cassette, a vinyl record or even just the radio) and share these with each other in the shape of the well-known mixtape (Voida et al. 2006, 60). As Brown & Sellen describe, mixtapes played a strong part within a music

community, as they "provided a means of establishing and maintaining social bonds with other people" (ibid.) and were surrounded with the social practice of gift-giving. Later, listeners would copy CDs or share MP3 files (Brown & Sellen 2006, 43-44). It became a part of their social network: friends would copy music for each other and find out about new music through copies and through each other. Being able to do this was named as a reason justifying copying music rather than buying it: consumers would rather first sample new music before spending money to buy an actual copy (ibid., 43). It also served as some sort of manual, collaborative filter: listeners would help their friends find new music and found out about each other's tastes while doing so.

In this section, the development of the four elements of music value under discussion in this research - the artistic, financial, content and social value - have been explored up until the introduction of digital music. Original, physical copies of recorded music held financial value, despite piracy already very much being an influence. They also held an artistic value, though not in a way similar to visual art - recorded music offers a registration of a live work of art, but can emulate an artistic experience. The changes in materiality have also been discussed: with the physical artefact moving from large vinyl records to CDs to becoming in some sense immaterial, Tom McCourt believes the content value and with it, the ability to form an emotional attachment to an album has strongly lessened (McCourt 2005, 249-250). Recorded music having a physical presence also enhanced its social value: music had to either be listened to together or in some way physically exchanged to share it. What this means here is that the materiality of recorded music has the ability to influence, or in some cases even shape the value it is given. The next section goes deeper into the influence the introduction of digital technology has had on all four value types, from the artist, industry and consumer side of music.

2.2 Music in the digital age

The introduction of digital music had a strong influence on music value as it was up until that point. The material and social changes in the way music was distributed, obtained and consumed led to a re-evaluation of recorded music, to which streaming services like Spotify are a response. To better understand how the technological advancements influenced artistic, financial, content and social value and how new qualities became associated with

modern music consumption, this section discusses the way these value types have changed in the age of immaterial music.
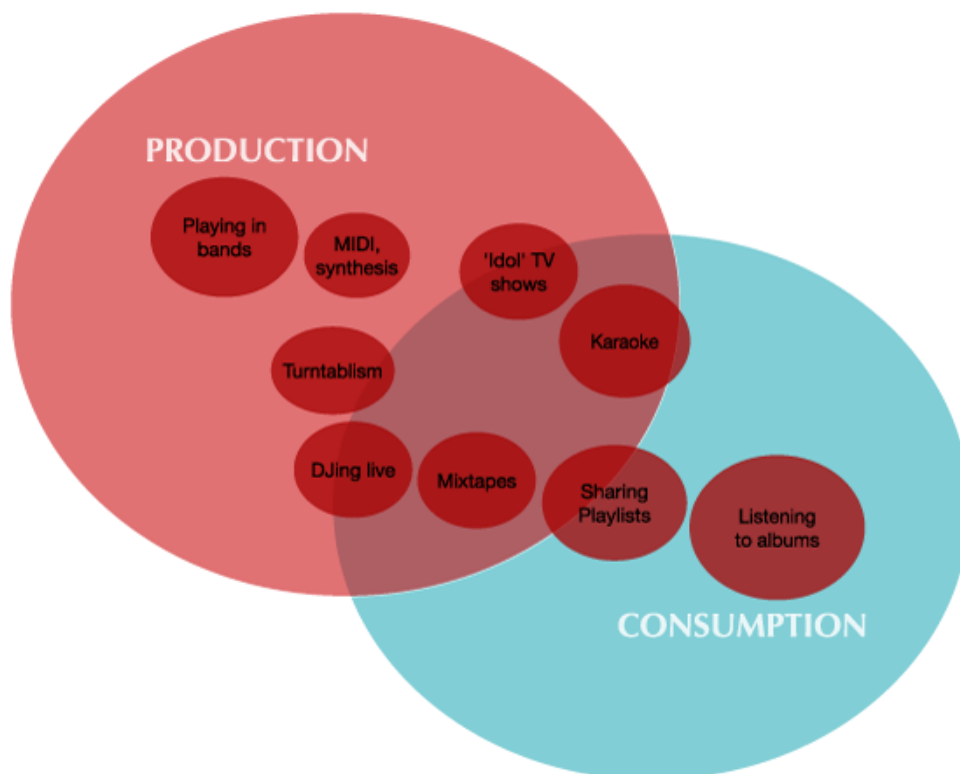

Figure 1: The continuum between production and consumption.

Taken from Ebare, Sean. 2004. "Digital music and subculture: Sharing files, sharing styles." *First Monday* **9 (2).**

A development that has influenced the artistic element of music value in more recent times is the increased ease with which music can now be produced and recorded or re-appropriated from home. Technological developments have lowered the bar for anyone to become an artist. In his essay on the subculture surrounding digital music, communications researcher Sean Ebare adds some nuance to this idea by creating a division between production and consumption (see Figure 1), meaning one side actually creates something new, whereas the other half is merely just part of its usual use (Ebare 2004). As Ebare elaborates, on the consumption side, music is regularly played or placed in playlists or mixtapes; it is rearranged and given different context, but the music itself remains the same. Consumers in the crossover section re-appropriate existing recordings to create a new original, and those in the production side actually record new sounds using instruments or software to make up a new composition (ibid.). Amateur musicians are now also much more

capable of reaching an audience: "the ease of distribution afforded (through MP3s) to amateur musicians has inspired a deluge of online amateur musician communities, and has made possible more numerous points of contact between musicians and audiences than previous media structures allowed" (ibid.). This point does also hold true for musicians less likely to be described as an amateur - they too are more accessible, but also have more ways to reach their audiences. According to theorists like Ebare and Lange & Bürkner, the strict line between artist and amateur is slowly but steadily fading with technological developments as its main reason.

The earliest forms of artistic value were shaped by the recording industry: a combination of artists, producers, record labels, distributors and other parties who could decide how a work was presented to an audience and how this audience could consume it. The process of digitalization and the birth of the producer-consumer (or prosumer) have turned this around. As Lange & Bürkner put it: "these new developments have virtually erased traditional understandings of top-down music production, as well as of bottom-up production based on physical sound carriers" (Lange & Bürkner 2013, 151). Music production has become a more inclusive process, where former consumers with the right equipment can become a part of what first took a lot more start-up capital, allowing the bar to becoming a recording artist to lower to a very minimal level.

The very same developments that have helped lower this bar and given already established artists a much wider range of promotional tools have also had some much discussed negative sides, mostly in the form of music piracy. As mentioned in the previous section, this is not a phenomenon new to the digital era, with physical piracy having previously been a large part of the music market in the Far East and Russia. But as media researcher Mary Madden points out, with the introduction of digital music, the media consumers have taken over control, which she describes as the Napsterization effect (Madden 2009, 5). This effect refers to peer-to-peer service Napster and similar services, which ""schooled" users in the social practice of downloading, uploading, and sharing digital content" (ibid.). According to media researcher Nick White applications like Napster made it much easier and particularly cheaper for private consumers to pirate music, causing it to occur on a much larger scale than it did with the more organised physical piracy (White 2010, 17). Madden defines the Napsterization effect as "a massive shift in a given industry where networked consumers

armed with technology and high-speed connectivity disrupt traditional institutions, hierarchies and distribution systems" (Madden 2009, 5). This is part of the same development that Lange & Bürkner described: in this case, not new music production, but online music piracy turned the music industry around and with it the common practice of paying money for recorded music.

As Chris Anderson claims in his book *Free: The future of a radical price*, piracy has made products that were not meant to be free available at no cost (Anderson 2009, 53-54). The music industry likes to compare piracy to theft, but it's something wholly different: rather than stealing a copy of something, it is reproduced - thus the author does not suffer a loss explicitly; rather, he or she suffers from a lesser gain (ibid., 54). Some researchers even consider the possibility that piracy is positive for the music industry: according to Peitz & Waelbroeck, consumers may no longer pay for all the music they download, but they are willing to pay more for the music they've sampled and liked, as they are more likely to see it as a product worth purchasing (Peitz & Waelbroeck 2006, 907-909).

Of course, the music industry has attempted to hit back at piracy, which they saw as the biggest reason for their decline in sales figures (ibid., 907-908). They have tried to do so through several court cases, but also by offering up their own alternative with online music stores. After some unsuccessful attempts with label-specific stores, multi-label stores started up (with Apple's iTunes Store as the best-known one), but there was an industry demand holding it back, which was mostly about staying in control of the music. This demand came in the shape of Digital Rights Management (short: DRM) software, which posed limitations on the consumers that bought digital music online (Sharpe & Arewa 2007, 332-333). As explained by Sharpe & Arewa, examples of those limitations would include that a song could only be played on a select number of devices and could only be recorded onto a CD a small number of times. According to *TIME* writer Lev Grossman, limitations like these may be among the reasons that pirating music was popular: not only was it free, but consumers also had the freedom to use it in whichever way they liked (Grossman 2007).

Based on the events surrounding piracy and the battle against it up until this point, Madden constructed a list of the five selling points consumers have shown to want out of digital music:

- Cost (zero or as low as possible);

- Portability (use it on any device);

- Mobility (wireless access to music);

- Choice (access to any song ever recorded) and

- Remixability (freedom to remix and mashup music) (Madden 2009, 4).

With DRM on purchased songs, only the choice and (arguably) cost point hold up for digital music sold in online stores. However, with DRM gone, cost is the only point to distinguish sold music from pirated music. A possible conclusion that can be drawn from these five points is that customers want their music to be convenient. They want to choose what they listen to, how they listen to it, what they pay for it and what they do with it. This is where streaming services like Spotify come in: they offer most of these new qualities that are now so intertwined with modern music consumption.

In 2012, the profits made from music in Sweden started to rise, rather than fall, for the first time in years. Most of the revenue came from a relatively new format: streaming music services (Dredge 2013). At that point, Spotify was the market leader in streaming services in Sweden. Spotify has seen similar success since in more countries. What might contribute to Spotify's success is that they've taken the points consumers are interested in and molded these into a platform that is convenient to use and fulfils those expectations. Another contributing factor could be its business model. Spotify uses a so-called freemium model: any user can use the service for free, but with limitations. A full version of the service is available for paid users (Anderson 2009, 23-24).

According to a 2014 news article in the *Wall Street Journal* by journalist Hannah Karp, for the music industry, streaming services have had a negative influence on the established models of selling digital music (Karp 2014). The services have helped piracy go down, given record labels and artists more control over the distribution and presentation of their work and thus also offer them more revenue than they would have seen from illegal downloads. On the other hand, the popularity of streaming services have, according to Karp, made the number of legal downloads go down in large parts of the music market (ibid.). If music is available for free and can be accessed anywhere, the need to actually own the music fades away. As a

result, the financial value of recorded music has lessened, partly thanks to the industry's own influence.

The lack of a physical carrier in digital music also has its influence on the way music is consumed. It has given the listener more control. Vinyl LPs and cassettes nearly always needed to be flipped and CDs changed by hand, offering no easy option for the listener to pick their own order or even play songs from completely different albums. In this sense, the consumers were in some way controlled by the format, whereas now they are given the complete freedom to do as they choose, according to Tom McCourt (McCourt 2005, 249-250). It has also changed the idea of ownership - because to what extent do you own a song you've bought or downloaded online? Media scholar Anne Kustritz describes it as a clever trick by the music industry: "by selling the idea of limited licensing rather than ownership of a material thing, the industry seeks to convince the public to repeatedly purchase the rights to listen to music that used to be taken for granted as part and parcel of owning the thing itself" (Kustritz 2012, 49). Streaming services have taken this process even further: listeners now no longer need to have an actual music collection - by using one of these services, they get immediate access to (nearly) everything they could possibly want. Rather than owning their own collection of music or sharing it with friends, users now pay a monthly fee to 'borrow' a company's collection.

With the introduction of digital music, a large part of the idea of the communal music experience has become more anonymised; according to Voida et al., there is no longer a need to rely on friends to access free music (Voida et al. 2006, 61). They argue that peer-to-peer applications downplayed the role of the human and the social bond within the sharing practice: it was now a hunt for a particular file and the person sharing that file could be anyone (ibid, 60). Not all social interaction was gone, however: according to Andrade et al., new communities focused around sharing files were even formed (Andrade et al. 2005, 111). A number of streaming services are invested in bringing back that strong social element - though mostly using already existing social platforms like Facebook and Twitter. Within applications like Spotify, a user builds up a profile by listening to music. They can create customised playlists that can be easily shared with whoever they like more easily than ever before, although the actual in-app communication is usually minimal. But while sharing music with friends has thus become much easier to do in a much more streamlined manner,

some of the charm of handmade mixtapes or just the mere face-to-face interaction needed to share music may have disappeared.

The social value of music may have taken a very different shape after the introduction of digital music, and even more so with streaming services, but its importance is still similar: it has merely become easier for friends to share music with each other. And whilst some of the actual face-to-face interaction has disappeared from view, services like Spotify can also help to connect consumers to those who share a similar music taste.

In this section, the development of the artistic, financial, content and social value of recorded music during the introduction of digital music has been traced. The increased ease with which music can now be created, altered or reused by pretty much anyone with access to some basic technology has largely lowered the bar to becoming a recording artist. It has also lowered the bar to entering piracy: the invention of the MP3 format and applications like Napster and BitTorrent clients have made it increasingly easy for consumers to illegally download the music they want, increasing piracy to a much larger scale than before. The easy access to music also shaped new qualities that are now tied to music consumption like portability, low to no cost and near endless availability of content - qualities that streaming services like Spotify have picked up on, and offer their customers. The change in materiality has also created a new perspective on ownership of recorded music. With physical carriers, a consumer either owned an original or a copy of a piece of recorded music. With digital music, a consumer can either legally or illegally have a copy of a piece of music on their hard drive or not even have an actual copy, but rather stream - and thus in a sense borrow - it from a music streaming service. The social practices surrounding music consumption and sharing changed too, largely moving from sharing tapes and CDs to exchanging files (occasionally in person, but mostly through the internet) and sharing links to playlists, with new communities forming that focus on sharing music online.

The focus in this chapter has mainly been on how the change in recorded music's materiality are reflected in the elements of music value, looking from both the industry and the consumers' perspective. In the next chapters, an affordance analysis is conducted to research how this materiality has further changed in Spotify and the consequences of this development are discussed through a discussion of the value types in the streaming era. The

next section features an explanation of the research method used, which is then followed by this re-evaluation of recorded music.

3. Research method

To answer the research question and find how the artistic, financial, content and social elements that are part of the value of music have been influenced by the introduction of music streaming services and the change in materiality of recorded music, an analysis of the online music streaming service Spotify is undertaken. This analysis takes the shape of an affordance analysis, which is usually part of a material object analysis (Van den Boomen & Lehmann 2014, 9). Please note that no full material object analysis takes place in this thesis. The analysis has a focus on what the service offers consumers and producers and how the relations between all different actors may influence the four value types.

As mentioned earlier, there are a few reasons why this particular service was chosen to analyse. First of all, it is among the longest-running services in its field. Spotify was founded in 2006 and launched in 2008. Since then, it has become the most popular of its kind according to an article in *Billboard* (Stutz 2015), thus giving it both longevity and a large number of users. These are elements that can strongly enlarge its possibility to influence the music industry and music consumption in general and with that, it gains the possibility to have an effect on the value of recorded music. Spotify was also chosen because it is a somewhat controversial service: its popular freemium model has been quite heavily criticised by several record label executives and a number of big name artists (Arria 2015), while it is this same business model that makes Spotify so successful (Levine 2015).

In this research, the service is treated as a digital, material artifact: a digital artifact that is made material by, as communications researcher Walter Leonardi poses it, "the notion that it provides people with capabilities that they can use to accomplish their goals" (Leonardi 2010) - their goal, in this case, being listening to music. For the sake of this research, this analysis only focuses on the outer layer of the service in its desktop application: the interface the users interact with and with that, the perceived affordances the software offers. Perceived affordances are here approached as defined by Donald Norman as actions that the user perceives to be possible (Norman 1999, 39). The analysis mostly focuses on the representation of the interface and thus on "the actual possibilities the interface provides and on the subtle ways of channeling user activities by stimulating certain activities and averting others" (Van den Boomen & Lehmann 2014, 12). The focus lies on this side of the

software, because this research looks for ways the introduction and use of this software by both producers and consumers has had an influence on music value. Value is a concept awarded to something (in this case music) by human actors, and the interface is where those actors determining value come together. The interface is the side of the software both parties interact with most and is, in this case, the most relevant for analysis.

Analysing the service is an important part of answering the research question, because it is the place where all factors involved in modern music consumption come together. Not only has streaming become one of the most popular ways of consuming music, but choosing to stream music over buying or downloading it has also affected the relation between a listener and the music he or she listens to. If a consumer opts to go with streaming, the service and its player are a part of the product: when a consumer chooses to use a certain service, he or she also chooses for the means of playback that service offers, as the two are no longer separate. This means that the value awarded to a piece of music by those consumers is tied up with a service and the way it handles music consumption may influence that value.

To still be able to compare this form of music consumption to its predecessors, the service is analysed on a smaller scale as well, looking at the separate parts of the application, including an album page. For this smaller scale analysis, one particular album was selected: the 2015 album *Drones* by English rock band Muse. This album (and one song on it in particular) made the news in 2015 as it contains a song that was only available to paying users of Spotify (Cook 2015), despite being available on every other format the album was released in. Besides this being a way of looking at the actual music side of Spotify, it also offers an entry point into discussing the growing amount of content exclusive to certain music platforms - something that is occurring more and more since artists have started speaking up about their disagreement with Spotify's freemium model, as outlined by journalist Billy Steele (Steele 2015). Of course, exclusive content is not a new phenomenon introduced by streaming: deluxe versions of albums that feature more content have been common for a much longer time and it is more a business move than a material matter. What makes it different here is that it effectively changes the album by removing a song on one specific platform. Rather than buying an extra album just to get a song, consumers now need to subscribe to a service just to get access. In the case of service-exclusive content, they may even need to subscribe to multiple services to have access to all the music they want. This is

why analysing it through an affordance analysis may be useful: it is a clear example of the limitations of using a streaming service over buying or downloading music. It also stresses the usefulness of researching Spotify with an affordance analysis within this research: by focusing on both the options and the limitations of the platform, the ways music can be consumed become clear, as well as how it differs from previous methods of consumption. This, in turn, can then give way to further researching how these options influence the shaping of value types.

However, merely describing its affordances as a way of researching Spotify has its limits and does not yet provide an answer to the research question posed. As sociology scholar Ian Hutchby poses it, analysing affordances is mostly about analysing the relationship between different social actors: in this case, it looks at how a piece of software can be interpreted and how these interpretations may be steered by the software itself (Hutchby 2001, 449-450). According to Bill Brown's "Thing theory", through its affordances, the software goes from being an object to being a thing: an object with a relation to a subject (Brown 2001, 4). Bruno Latour agrees with him, but goes one step further: he believes subjects and things can't be considered apart from each other and that there are only such things as quasi-objects and quasi-subjects, which can only be considered as part of their network (Brown 2001, 12; Latour 1991, 10-11). To consider Spotify as part of a network and provide an answer to the research question, the findings of the descriptive analysis are interpreted within the context of Spotify as a player in the network of music consumption. This approach was inspired by actor-network theory as interpreted by Tatnall & Gilding (Tatnall & Gilding 1999, 957-958) and is used to extend the affordance analysis and be able to discuss how social or human elements have influenced technology and vice versa - in this case for example, how streaming services may have influenced the value an element of music consumption is awarded and how the value awarded to music may have influenced the way Spotify works. Actor-network theory inspired this approach by setting a way of placing software and its accompanying affordances within a social and cultural context, and thus allowing it to play an active role within its network; however, it should be noted that this thesis does not undertake an actor-network theory analysis. According to Tatnall & Gilding, all actors in a network, both human and non-human, are equal and should be approached as such (ibid.). The relevant results of the descriptive affordance analysis are placed with the

value types introduced earlier and their influence on each other is discussed. This places the findings within the context of the network described in the previous chapter: that of the music industry, authors and consumers.

In this section, the method used to research Spotify and answer the question of its influencing and being influenced by music value has been explained. In the next section, the results of the affordance analysis will be discussed, placing its findings with their relevant value elements to trace their impact on one another. The results of this discussion will give an answer to how the value elements have been influenced by the introduction of streaming services like Spotify.

4. Spotify and the changing values of music

This chapter is centered around an analysis of the popular music streaming service Spotify, researching its affordances, its limitations, its materiality and its place in the network of music consumption. To do so, the functions of the entire application are described and its findings discussed within the context of previous music formats, downloading in particular. Before starting that, it may be wise to give Spotify some further introduction. The company was founded in 2006 by Daniel Ek and Martin Lorentzon, with a first version of the service launching in October 2008 in a limited territory, expanding its markets ever since. It is, at the time of writing, the most popular application in the world for streaming music according to a news report in *Billboard* (Stutz 2015).

The service uses a so-named freemium business model, in this case meaning it offers two types of subscriptions: Spotify Free and Spotify Premium. As its name indicates, users are not charged for using the Free option. In exchange for free access, they are confronted with advertising and limited functionality within the application - they can, for example, not download songs to listen to while not connected to an internet source and can only use the mobile application in shuffle mode. Spotify Premium charges users a monthly fee, though there are a number of different discounts available in different regions - for example, students in the United Kingdom only pay half price and there are options to subscribe as a family, share an account and pay less. The premium option removes the limitations placed upon free subscriptions and allows for its users to play music in a higher bitrate, which should technically sound better. As mentioned earlier, Spotify's business model has been quite heavily criticised by members of the music industry. Spotify reacted to that by imposing more restrictions on users of the free service, but turned back that decision after seeing their subscription growth slow down, as was reported in an interview with Daniel Ek in *Billboard* (Levine 2015).

Spotify is available on an extensive range of platforms, the most important being a regular desktop application, an in-browser web player and applications for all kinds of mobile devices, including tablets and smartphones using different operating systems. The application under analysis here is the regular Windows desktop application, chosen both for convenience, but also for having the largest number of options and possibilities. For this

research, the software was set in the English language, but viewed from the Netherlands both with and without logging in, and using a free and premium account. Spotify was analysed using an affordance analysis. The first step in this analysis is an examination of the software, which, after two days of trying, testing and researching all the options in Spotify, resulted in a rather lengthy description of the affordances within the application. This full description is included in the appendix at the end of this paper. In the next section, the relevant findings from this descriptive step are interpreted and discussed within the context of the appropriate value type.

4.1 Music value and Spotify

The four elements of music - artistic, financial, content and social value - have, as discussed earlier, been around since the early days of recorded music and they are all still found in Spotify. They have, however, evolved to accommodate the changing times, technologies and trends. In this section, it is discussed how each element has evolved in the streaming age through revisiting each value type and interpreting the findings of the descriptive step in the affordance analysis included in the appendix.

4.1.1 The artistic value

As mentioned earlier in this research, the introduction of digital music had quite an influence on artistic value, and streaming has taken this even further: it has further changed the idea of an album, what it means to release music and allows for artists to expand their music. Before streaming, the introduction of digital music made an impact, both in the way the music industry retained control of the way their output was used, but also in how difficult it was to actually become a recording artist. Particularly this first element has developed further through streaming. With the introduction of digital, it became much easier for consumers to use music the way they saw fit: albums and songs were downloaded, taken apart and repurposed, usually without consent of the rights owner. With streaming, authors have simultaneously gained and lost some control over their work. Artists or their record companies decide how their music is represented on a streaming platform. They can decide which versions of songs are available and whether they are listed as albums or singles, which, with the popularity of streaming slowly overtaking downloading, keeps them in control. Opposite that, artists have now definitively had to let go of the idea of releasing an album as a complete expression of art. This was already somewhat the case with many

artists releasing singles that were also included in full albums, but with download services like iTunes, it was at least possible to make songs on an album available as 'album-only' - they could only be bought and downloaded as part of a full album. As was found in the descriptive step of the analysis, in Spotify, this is no longer possible - albums are no longer bought, but directly consumed, leaving users to decide immediately if they are interested in the full thing, or just a few songs.

The growing options that streaming services offer are also an opportunity for artists to expand their work beyond just their own music. The appendix shows that Spotify can, for example, show playlists made by the artist (or someone in the artists' name) which could showcase the music they enjoy, or music that inspired them for their own work, giving an insight into the creative process. The immateriality and lack of ownership of streaming music also make it easier for an artist to update already existing work, as they can expand their albums or alter them after their release, without having to ask listeners to buy another copy. For example: rapper Kanye West altered existing songs and added new songs to his album *The Life of Pablo* soon after it was released, and thus, according to music website *Pitchfork*, changed the idea of when an album is actually finished and released (Greene 2016). Streaming does not give way for consumers to reuse music the way downloading did - as found through the descriptive analysis, the options in Spotify don't go much further than creating playlists, and thus taking songs out of their intended context by placing them in a new one.

What has become clear here is that streaming music has a different impact on artistic value than downloading had. Looking strictly at legal ways of obtaining music, the idea of an album being a full work of art that should be listened to in its entirety is old-fashioned, and can, in streaming, no longer be encouraged by denying certain parts to be obtained separately. Streaming also makes recorded music more flexible in more ways than one: not only can users cherry pick tracks without further cost, but artists can also release new or updated music without having to ask their listeners to pay again. This is changing the idea of releasing music itself, as it becomes unclear whether a release is finished or still in development, like Kanye West's *The Life of Pablo*. These changes offer the opportunity for artists to expand and change their artistic output at will, leaving them and the other rights holders with more control over their work.

4.1.2 The financial value

The introduction of streaming services has brought about a change in the way the music industry makes money off recorded music. Rather than sell albums and singles, the income from Spotify depends on the number of times songs get played, the number of paying subscribers and advertisements - a change that leads to strategies to get more subscribers to pay for their music. As has been established in an earlier section, digital piracy had quite an effect on the perceived monetary value of music before streaming. With legal downloads barely offering anything more than illegal downloads, a considerable amount of consumers chose downloading something for free over paying for what was, in its essence, virtually the same thing. Spotify has embraced this idea of free music by applying their freemium model, which, as the appendix shows, allows listeners to use their service at no direct monetary cost. As was described there, Spotify users with free accounts see and hear advertising, and their options within the application are limited - all things that go away when a user decides to upgrade to the premium version of the service and pay a monthly fee. The earnings from these two sources are used to pay rights holders, but also to keep the service running - according to Spotify themselves, nearly 70% of their earnings goes directly to rights holders (Spotify 2016).

Recently, exclusive material for paying users has been introduced in Spotify - possibly as a way to entice more users to upgrade to a paid account. This is, as mentioned earlier, no new idea: physical albums were often released in a standard and deluxe version, with the latter usually featuring more content, and special bonus tracks for full album downloads aren't unheard of either. As is indicated in the appendix, during the analysis of Spotify, it was found that on English band Muse's album *Drones*, one of the songs, *The Globalist*, is greyed out and unavailable to non-paying users, stating it is 'Premium Only'. According to an article in *Business Insider*, this has been the case since its release in 2015 (Cook 2015). When logged into a paying, premium account, the song is available. This is an interesting case as it is not a bonus track: the song is a part of the release on every other platform, and even flows into the song after it - which is available to free users. Similarly, there have also been full albums and singles by big name artists like Kanye West, Rihanna and Beyoncé that were temporarily only available on Tidal - a platform only accessible to paying users. Whilst piracy is still an option to get this content for free, exclusive content like this may lessen the convenience of a streaming service like Spotify for its non-paying users.

Despite Spotify's claims that most of their income is paid to rights holders, as mentioned earlier, a number of popular artists have spoken negatively about Spotify's methods, with some even deciding to not release or remove their music from the service. However, as marked up in a CNBC news report, a lot of artists no longer depend on their recorded music to make money, but rather on selling merchandise and tickets to their live shows (Chang 2015). The descriptive analysis shows that Spotify also helps artists do this: the application shows its users live shows near them by artists they listen to and makes it easy to buy tickets, and it does the same for merchandise. This could, however, also be seen as little more than a scheme to contradict the negative voices and show that they do help an artist make money.

Overall, the financial value of recorded music has, too, been influenced by the introduction of streaming services. Rather than making profit from sold albums, with streaming, the money is in getting music played, preferably by either paying subscribers or subscribers who see advertising. This new tactic has also led to a new strategy: withholding music from non-paying subscribers may move them to start paying to have convenient access to the music they want to hear, rather than moving on to piracy.

4.1.3 The content value

Streaming has stripped the content of a piece of music to a minimum even more than downloading has: as the appendix shows, in Spotify, music hardly goes beyond the music itself, some metadata and a small piece of artwork - none of which a user actually owns. To make up for this loss, Spotify has added several features that can either add to the music or help users expand their digital library. In the days before digital music, original copies of recorded music had a certain content value: buying music meant getting a physical copy, complete with artwork, liner notes and possibly more - something to build a collection with. As discussed earlier, much of this changed through the introduction of digital music and downloading. The physical artefact was gone, and so was much of the content that came with it - albums got stripped back to mere digital files containing music. Legal download stores compensated for the loss of further content somewhat, by occasionally adding digital artwork and other extras (like videos) to albums, with iTunes even inventing the concept of the iTunes LP: interactive artwork within which the album and further extras could be found. Within Spotify, the analysis in the appendix describes that the options are a bit more limited.

The artwork in the application is restricted to a small image of the front cover of an album, and the extra content is limited to an artists' biography, some photos, listening statistics and lyrics that scroll along to the song playing. This is already more than just bare-bones music files, and, with the recent addition of merchandise and ticket stores to their application, this may be an indication of Spotify building towards extending music consumption beyond being merely about the songs.

Despite the fact that, in streaming, listeners don't actually own the music they play, Spotify has included the option to collect music by saving songs, albums, playlists and artists. However, as described in the appendix, collecting is very different here from the way it was before streaming - it takes very little effort and no money to build up a collection, as Spotify affords its users to add music to it with a mere mouse click and these collections are made up of material every user has access to. While the element of collecting may be somewhat lacking, the analysis shows that Spotify does a lot of things to help users find their way towards new music. Particularly their playlists - both curated and automated - may be a good lead for users there, as they make use of their personal interests, but users can also take their pick from a large database of playlists. These playlists take the place of what the compilation album used to be before digital music: a collection with a theme - be it a certain genre, artist or simply the biggest current hits - with the addition that they can be very current and constantly updated. The introduction of streaming brought about a further transformation in content value: with the lack of a physical carrier, artists and platforms both seem to be looking for ways to expand music. Spotify has made a few cautious steps in this direction so far by including lyrics, photos and statistics about artists and songs, expanding beyond the possibilities of a physical album.

4.1.4 The social value
With the much lower reliance on other consumers introduced by digital music and then further evolved through streaming, the need for social interaction to get music is much less a part of music consumption then it was in the days of physical music. At the same time, sharing music has become much easier through streaming services, and the ability to share music on the growing amount of other online social platforms has changed the social relations surrounding music. As was already established earlier in this research, the introduction of digital music quite heavily influenced the social element of music. Many

consumers moved from exchanging mix tapes, homemade CDs and swapping files to downloading music themselves without much reliance on social interaction, especially not face-to-face. Since that moment, much has changed in the way of online interaction, with the likes of Facebook, Twitter and other social applications becoming a large part of their users' day-to-day interactions and offering them many different options. Within Spotify, however, the analysis shows that the social element is still rather limited. Users can become friends and see what others are listening to, send each other in-app messages (though only when a song, album or playlist is attached) and build playlists together.

Much more important may be the role its functions play outside the application. As the appendix makes clear, Spotify affords its users the option to easily share music through the other social platforms mentioned, with just one simple link possibly leading to an extensive and carefully crafted playlist. And perhaps, with a plethora of social platforms outside Spotify, there isn't need for much more in the application itself. The social value of recorded music has, much like its consumption, mostly shifted to online places. While its presence within Spotify is rather limited, the ease of sharing music makes it capable of playing a part in social interactions on other platforms.

Looking back, up until this point, streaming has had its influence on the four elements of music value. Artistic value has been influenced both positively and negatively for the music industry: streaming has brought them some more control over where their work appears and how, but it has also forced them to either accept that albums are more a collection of songs than a complete work of art than ever, or not take part in streaming at all. On the other hand, it has also given artists the possibility to experiment beyond traditional ways of releasing music, even allowing them to alter their work after release. Streaming has also had its influence on the financial value: with Spotify offering free music to its users, the need for them to pay is still very low. Spotify's success does, however, ensure that artists are at least getting paid for the times their music is played through the application and it offers help in selling merchandise and concert tickets. The streaming model has also spawned a new take on an old business model, where some music is made available exclusively to those who pay. The content value of recorded music has gone through an interesting transformation: it has moved from having a physical presence to a digital one, with artists having the option to expand their work in many different ways. This has, so far, only been applied in a rather

limited way in Spotify, complementing the music with small artwork and lyrics. Lastly, the social value of music is still very present today, though its focus has moved from giving others access to music to helping others find new music, with the interaction mostly performed online rather than face-to-face. The next section wraps up this research and reflects upon the research question: how have the artistic, financial, content and social elements that are part of the value of music been influenced by the introduction of music streaming services like Spotify and the change in materiality that came with it?

5. Conclusion

In the first few years of Spotify's existence, there was a lot of enthusiasm. According to journalist Steve Kovach in *Business Insider*, users were happy to have free, easy access to music (Kovach 2011), record labels suddenly saw their profits grow for the first time in years (Dredge 2013) and rock band U2 even released their album on the service first (McCormick 2009). But in recent times, as reported by journalist Hannah Ellis-Petersen in *The Guardian*, more and more criticism has hit the service, with a number of popular artists disagreeing with the way the service values music (Ellis-Petersen 2014), removing their work, and ultimately, introducing Tidal as an alternative. Music value is a difficult concept that takes in not only artists, but listeners and the music industry too. Despite that, a large amount of research only focuses on the financial side of music streaming, which is why this research has taken a broader look at value: it has traced the development of the different affordances a service like Spotify offers through its predecessors and the way music consumers tested the limitations instilled in earlier music formats.

Four types of music value were central to this research: artistic, financial, content and social value. All values were a part of music even before it was digital, and are still very much a part of modern music consumption now. The four values have all been further explored, both before the introduction of digital music and after, up until the arrival of streaming services. To then research how streaming influenced these values, Spotify was examined through an affordance analysis, with the results of the descriptive analysis interpreted within the context of the four value types. These actions were all in service of answering the question central to this research: how have the artistic, financial, content and social elements that are part of the value of music been influenced by the introduction of music streaming services like Spotify and the change in materiality that came with it?

What this research has shown is that there are many ways to value music - even the four types selected here have a different value to each part of the network surrounding recorded music - and these values all influence each other as well. It has also shown how these values have developed through a change in materiality: moving from physical music to digital files to streaming music, music as an art form has changed. Making it digital has made it much more flexible, with listeners being able to repurpose it, but also with the boundaries of when

a piece of music is finished and released being broken. Financial value still plays a big role - it is, after all, an industry. Services like Spotify can be both positive and negative in that sense: it helps artists get paid, but simultaneously enforces the thought that music should be free of charge. The content of a music release has made a transition from a physical object to a digital one. Digital music allows artists and services to go beyond the boundaries of the regular album by adding all kinds of extra content, though this chance is not taken much yet. Finally, as it always has been, the social value of music is still very much around. Despite there being no need to rely on others to have access to music, the ability to share music with others has greatly improved, leading to many options to find and explore new music.

The scope of this research has been rather small, with a focus on four value types and one service. By choosing the biggest, most popular service and four important factors in music consumption, the scope was hopefully wide enough to take in the most important developments and see what influence they had. Of course, for a full answer on all forms of streaming, many other services and elements should be considered, but unfortunately, there was no room to do so here. Using affordance analysis as a method has served this research well: it was proven to be an effective way of grasping the way a basic streaming service works and how its users are limited in their options. Treating Spotify as an actor within its contextual network has allowed for the findings to be interpreted with Spotify as an equally important player in the network as artists, listeners and the music industry. This was vital to this research, as it ensured the results of the affordance analysis could be discussed within the context of the four values and include influences beyond the scope of just the application.

While researching for this paper, it was rather surprising to see how little there seemed to be written on streaming music so far. Of course, its growing popularity is still somewhat recent, but most research seems to focus on either the financial side of streaming or the move from ownership to service access. This is a shame, because with the amount of stakeholders within the music industry and the enormous audience music in general has, there are plenty more interesting topics to be found. For example, further research into the social side of streaming could prove very interesting. Do new communities grow from interacting with people who like the same music? Are playlists really the new mixtapes, and are they still shared in a similar fashion between friends?

But also just going from this research here before you, there are a good number of possibilities to continue with. It could, for example, prove very interesting to focus on one of the value types mentioned and dig that out deep, tracing its development up to this point. Streaming and music have been changing for a long time and are likely to continue doing so for a while to come - there should be plenty of opportunities for research ahead.

In the end, music has always been in flux. It has changed in style, in carrier, in the way it is made, distributed and consumed and so much more. Music consumption is now getting to a point where it is not unusual for listeners to be used to having access to all music, always, for as little money as possible, but who knows what's next? At the pace everything has changed in the last two decades, we could be using totally different means and consuming music in a totally different way six months from now. It will be very interesting to see what the future holds, but for now, let's just enjoy the ride.

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Appendix: an affordance description of Spotify

When running the software for the first time, a user is asked to either log in with their Facebook or Spotify account, or sign up for one of the latter. It's clear Spotify cannot be used without a subscription - without logging into an account, the user gets no access to any of the services' functionalities. After logging in, the user is taken to the main Spotify hub, which is presented as a homepage of sorts. The application is set up as a sort of browser, with all options and functionalities presented in separate bars on the sides, top and bottom.

At the very bottom of the application are the playback controls, wrapped in a bar. The controls use symbols that are very similar to what has been common in music playback for decades: a triangle and double bars to start and pause playback, arrows to move to a next or previous track, twisted arrows for a shuffle function and arrows pointing at each other in a recurring loop to repeat a track. Their choice to use these common symbols decreases the chance of misunderstanding their functions. The bar also includes a volume changer, a progress bar to show how far along the song is, the timings of the track and buttons marked lyrics and queue. The lyrics button takes the user to a new page where, in time with the music, the lyrics to the song playing appear. This functionality is, however, at the time of writing, crowdsourced, and thus prone to errors and the occasional internet troll. The queue button also takes the user to another page, this time displaying which songs will be played after the current one if he or she undertakes no further action.

Above the playback bar, on the left side, is a miniature of the artwork for the song (or album) with the title and artist underneath. Using the right mouse button on the artwork gives the user a number of song-specific options: to add the song to the queue or a playlist, to visit the page for the album or artist, to go to its radio (this function is elaborated on later on) and a multitude of options to share the song with other users. These options include copying a link or a piece of HTML code to share the song on other platforms, but also Spotify's own sharing tool, which allows users to post a song to their Spotify profile, to be seen by their followers, or share it in private with another user. When using a free Spotify account, this spot is also occasionally used for advertising. Between every few songs, advertisements are played, either accompanied by an image or a video playing in the small artwork box, or expanding to show across the entire screen of the application. Above the

playback bar, there is another advertisement. Neither of these appear when a listener uses a paid Spotify account.

On the left-hand side of the application are options to navigate through Spotify. These are divided into three categories: 'Main', 'Your Music' and 'Playlists'. The first option under 'Main', 'Browse', leads to the same page the application opened with. This home page of Spotify is full of curated and automated playlists, neatly stored in categories and changing multiple times a day, indicating it is meant to help users discover new music. The featured playlists at the top are selected by overall relevance - examples include a 'Lazy Sunday' and a 'Rainy Friday' playlist, but also a playlist of the current popular songs in the user's country of origin. A bit further down, the playlist categories are fixed and thus the same every day. These are the 'Charts' section, playlists filled with new releases, a 'Discover' section and what Spotify calls 'Genres & Moods': playlists for specific genres or occasions. Particularly the 'Discover' section is interesting, as it recommends new music based on a user's previous music choices. The best-known element of this section is the 'Discover Weekly' playlist, which is a collection of 30 recommended tracks based on a user's listening history which is renewed every week. Each public playlist in Spotify can be followed: when a user does this, it will appear in a list of playlists on the left-hand side of the application, where it is easily found again. The final section of the Spotify home page actually has nothing to do with playing music in the application - it's the 'Concerts' tab. Here, based on a user's location and artists he or she follows or has listened to, a list of nearby concerts is shown, complete with dates and venues. Each date comes with a 'Details' button. When this is pressed, a web browser opens with the chosen concert's information on Songkick - a service that provides its users with personal concert calendars and offers the option to buy tickets. The tab also features a list of concerts that are popular near the user, which he or she may not necessarily listen to.

The second option under 'Main', 'Activity', is an overview of new posts by artists and users a user follows. These updates mostly consist of shared playlists with a comment by those sharing it. There are no options to react to it, other than listen to the playlist. The last feature under 'Main' is 'Radio'. This function can help users find new music similar to what they already like: a user can create their own radio station by giving it input - an artist, an album, a single song or a playlist all do the trick. The application then creates a playlist with

music similar to what was given as an input and while listening, the user can give it either a thumbs up or a thumbs down indicating their approval or disapproval of the offered track. Again, the service also recommends radio stations based on artists the user has recently listened to and certain genres.

The next category is 'Your Music'. This is where Spotify gets closest to pre-streaming music consumption, as it allows for users to build a music collection of sorts. It is where the music appears that people have 'saved', divided into songs, albums, artists, radio stations and local files. Essentially, this is where a user can build a collection of music that is easily retrieved and altered. Each album, song and radio station has the option to be saved, and each artist to be followed. Spotify users can also import their own music files into the application, so they can be played locally along with streamed music.

The final category, 'Playlist', unsurprisingly lists all playlists a user has created or followed. All users can create their own playlist and decide whether it is public or private. Private playlists will not be shown to other users, whereas public playlists can be seen and followed by every other user of the service. An interesting option playlists have is to make it a collaborative playlists: this function opens up a playlist for other users, allowing them to change it as they see fit.

The personal profiles users have on Spotify are not just used for recommending new music. They are also the way users connect with each other, by either following or being followed by other users. The user's own personal profile can be found in the top right corner, represented by a picture and their name. Clicking on either leads to their personal page, which features an overview of the artists they recently listened to, their public playlists (both the ones they made themselves or the ones they follow) and the users they follow and are being followed by. What is shown can be altered by the user - they could also choose to not share any of this information with other users. Users can find other users through getting a link to their profile or searching for them using Spotify's built-in search function. There's also an internal messaging system available, though that seems to rely on actively sharing something with one or multiple users - the option to send a message can only be found by choosing to share a song, album or playlist. Sent messages appear in a user's inbox, found next to the user profile button and represented by a symbol of an actual inbox. If one user

follows another, their activity on the service will be shown in the so-named 'Friend Feed' on the right side of the application. This feed shows what friends are currently listening to or have listened to last and can thus, too, serve as a way of discovering new music.

Spotify's search function does not only serve to find other users - it also offers up search results for songs, album, playlists and artist profiles; in short: to find music. Artist profiles look similar to user profiles, but are more elaborate. It's where an artist's music can be found, but Spotify also provides listeners with background information on the artist in question. For this part, the profile of English rock band Kasabian has been used as most profiles are cast in the same mould and this is one that seems to use all available options to artists. Artists, like users, can be followed through their profile using the 'Follow' button at the top of their profile, but rather than seeing what the artist is listening to, users will get a notification when new music by a followed artist is released to the service. An artist profile contains three tabs: 'Overview', 'Related artists' and 'About'. The second speaks for itself: that tab gives an overview of artists that are similar in sound to the artist in question. The 'About' tab gives some more information on the artist: it shows a biography along with some photos, the number of monthly listeners the artist has, the top 5 cities that listeners are located in and the top 5 playlists the artist is discovered in.

The 'Overview' tab is the main page on an artist's profile. It is topped off by a photo of the artist, a 'Play' button and the aforementioned 'Follow' button, the number of monthly listeners, an overview of which of a user's friends listen to this artist as well and the three tabs mentioned in the last paragraph. Next is the artist's most recent release and a list of five of their most popular songs on the service (with the option to see five more) and the number of times these have been played in total. For some artists, this is then followed by the possibility of buying some merchandise: under the title 'Offers', a few products are shown which, when clicked on, give more details on the item and a 'Buy' button that leads to the artist's online merchandise store in a new browser. What follows is the actual music. It is divided (where available) between albums, singles, compilations, artist playlists and albums the artist appears on, in that order. These releases are all shown in reverse chronological order: the newest of each category is found at the top.

Finally, there's the album page itself. As mentioned earlier, the 2015 album *Drones* by English band Muse is used here to look at how an album is represented on Spotify. The album can be accessed through the search function, by clicking on the album title in a playlist and through their artist profile. In that last option, it is listed at the top as their most recent album. Compared to an artist profile, an album page looks rather bare-bones. The album artwork is shown at the top left, with the title, the artist, the year, number of songs and the total length of the album noted next to it. The full album has three buttons: a 'Play' button, a 'Save' button (which will save the entire album to a user's music collection) and one that leads to more options - these are the same as listed earlier for individual songs. Underneath, all twelve songs of the album are listed with their track durations and a popularity bar beside it. Before each title is a plus symbol - clicking this will save the song to a user's collection. Underneath the song list, copyright information for the album is listed, followed by recommendations for more albums by the artist.

Interestingly, the album tracklisting differs for Free and Premium users. On a free account, the track *The Globalist* is greyed out, with an added note saying 'Premium Only'. Accordingly, when logged into a premium account, the song is available to play. Because of this, the album made headlines surrounding its release. As reported in *Business Insider*, the decision confused and angered fans of the band, with Spotify commenting it was not a sign of a new business strategy, but rather part of a special promotional campaign (Cook 2015). The article also notes it was not the first time music was held back from non-paying users, but that it is the first case in a long time.